

REMARKS

Claims 10, 16, and 28 have been cancelled. Applicants retain all rights to the subject matter covered by the cancelled multiple dependent claims by making these claims directly dependent on a single claim. The subject matter now not included in these claims may be reintroduced as multiple dependent claims or as separate independent or dependent claims in the present application or in a continuation and/or divisional application.

Applicants also understand that, under the procedures of the PCT, a copy of the priority document (GB 9902647.8) has been supplied to the U.S. Patent & Trademark Office pursuant to Rule 17 of the PCT Regulations. It is, therefore, respectfully requested that the first Official Action in the present application contain an indication that the appropriate priority document is in the file of this application.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with Markings to Show Changes Made.**"

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 10, 16, and 28 have been cancelled.

3. (Amended) An actuating mechanism according to claim 1 ~~or 2~~, wherein the cage is adapted such that inward radial movement of the cage causes the actuating device to be placed into its actuated position.

4. (Amended) An actuating mechanism according to ~~any one of the preceding claims~~ claim 1, wherein the actuating mechanism further comprises a locking mechanism for locking the actuating device in its actuated position.

6. (Amended) An actuating mechanism according to claim 4 ~~or 5~~, wherein the locking mechanism further comprises release means for unlocking the actuating device from its actuated positions into its rest position.

7. (Amended) An actuating mechanism according to ~~any one of claims 4 to 6~~ claim 4, wherein the actuating mechanism further comprises override means for returning the actuating device from its actuated position to its rest position in the event of the surgical tool becoming jammed.

8. (Amended) An actuating mechanism according to ~~any one of the preceding claims~~ claim 1, wherein the actuating mechanism further comprises biasing means for biasing the actuating device in its rest position.

14. (Amended) A locking mechanism according to ~~any one of claims 11 to 13~~ claim 11, wherein the locking mechanism further comprises release means for releasing the interengaging means from its locked position into an unlocked position.

17. (Amended) A surgical instrument comprising an handle, an elongate shaft extending from the handle and a surgical tool mounted on the shaft at a location remote from the handle, the instrument further comprising an actuating mechanism according to ~~any one of claims 1 to 10~~ claim 1.

20. (Amended) A surgical instrument according to ~~any one of claims 17 to 19~~ claim 17, wherein the elongate shaft comprises an actuator rod slideably mounted, within an outer tube, the actuating device actuating the surgical tool by respective longitudinal movement between the actuator rod and the outer tube.

23. (Amended) A surgical instrument comprising a handle, an elongate shaft extending from the handle and a surgical tool mounted on the shaft at a location remote from the handle, the instrument further comprising a locking mechanism according to ~~any one of claims 11 to 16~~ claim 11.

26. (Amended) A surgical instrument according to ~~any one of claims 17 to 25~~ claim 17, wherein the handle is elongate to enable it to be held in a pen-like grip.

27. (Amended) A surgical instrument according to ~~any one of claims 17 to 2~~ claim 17, wherein the surgical tool comprises miniaturised forceps, clamps, scissors or diathermy hooks.

Claims:

1. An actuating mechanism for actuating a surgical tool of a surgical instrument comprising an actuating device having an actuator surface whereby the actuating device is operable by applying a force to substantially any part of the actuator surface for placing the actuating device in an actuated position from a rest position for actuating a surgical tool, wherein the actuator surface comprises a radially collapsible cage having a plurality of interengaging actuating pads, each pad being movable in a radial direction.
2. An actuating mechanism according to claim 1, wherein each pad has an inwardly extending groove and the actuating device further comprises a plurality of radially extending guides, each guide engaging a respective inwardly extending groove of each pad so that each pad is capable of inward and outward movement in a radial direction.
3. An actuating mechanism according to claim 1 or 2, wherein the cage is adapted such that inward radial movement of the cage causes the actuating device to be placed into its actuated position.
4. An actuating mechanism according to any one of the preceding claims, wherein the actuating mechanism further comprises a locking mechanism for locking the actuating device in its actuated position.
5. An actuating mechanism according to claim 4, wherein the actuating device has a plurality of actuated positions and the locking mechanism is adapted to lock the actuating device in any one of its actuated positions.
6. An actuating mechanism according to claim 4 or 5, wherein the locking mechanism further comprises release means for unlocking the actuating device from its actuated position into its rest position.

7. An actuating mechanism according to any one of claims 4 to 6, wherein the actuating mechanism further comprises override means for returning the actuating device from its actuated position to its rest position in the event of the surgical tool becoming jammed.

8. An actuating mechanism according to any one of the preceding claims, wherein the actuating mechanism further comprises biasing means for biasing the actuating device in its rest position.

9. An actuating mechanism according to claim 8, wherein the biasing means comprises a compression spring.

10. An actuating mechanism for actuating a surgical tool of a surgical instrument substantially as hereinbefore described with reference to any one of the accompanying drawings.

11. A locking mechanism for locking a surgical tool of a surgical instrument in its actuated position comprising interengaging means having a plurality of settings to lock the surgical tool in any one of a plurality of actuated positions, the interengaging means comprising latching means and actuator means wherein the latching means comprises a first stepped surface and the actuator means comprises, a second stepped surface, any one of the steps of the second stepped surface of the actuator means interengaging any one of the steps of the first stepped surface of the latching means to lock the actuator means in any one of a plurality of actuated positions, wherein the axial depth of each step of the second stepped surface of the actuator means is greater than the axial depth of each step of the first stepped surface of the latching means.

12. A locking mechanism according to claim 11, wherein the stepped surface or surfaces are conical.

13. A locking mechanism according to claim 11, wherein the stepped surface or surfaces are spiral.

14. A locking mechanism according to any one of claims 11 to 13, wherein the locking mechanism further comprises release means for releasing the interengaging means from its locked position into an unlocked position.

15. A locking mechanism according to claim 14, wherein the locking mechanism further comprises biasing means for biasing the interengaging means in its unlocked position.

16. A locking mechanism for locking a surgical tool of a surgical instrument substantially as hereinbefore described with reference to any one of the accompanying drawings.

17. A surgical instrument comprising a handle, an elongate shaft extending from the handle and a surgical tool mounted on the shaft at a location remote from the handle, the instrument further comprising an actuating mechanism according to any one of claims 1 to 10.

18. A surgical instrument according to claim 17, wherein the actuating mechanism is integral with the handle.

19. A surgical instrument according to claim 18, wherein the diameter of the cylindrical surface defined by the actuator surface of the actuating device is approximately equal to the diameter of the handle.

20. A surgical instrument according to any one of claims 17 to 19, wherein the elongate shaft comprises an actuator rod slideably mounted within an outer tube, the actuating device actuating the surgical tool by respective longitudinal movement between the actuator rod and the outer tube.

16

21. A surgical instrument according to claim 20, wherein the actuating device further comprises means for translating the radial movement of the actuator surface into longitudinal movement for actuating the surgical tool.

22. A surgical instrument according to claim 21, wherein the translation means comprises a plurality of radius arms which extend in an axial direction upon application of the force to a circumferential part of the actuator surface.

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23. A surgical instrument comprising a handle, an elongate shaft extending from the handle and a surgical tool mounted on the shaft at a location remote from the handle, the instrument further comprising a locking mechanism according to any one of claims 11 to 16.

24. A surgical instrument according to claim 23, wherein the elongate shaft comprises an actuator rod slideably mounted within an outer tube, the surgical tool being actuated by respective longitudinal movement between the actuator rod and the outer tube.

25. A surgical instrument according to claim 24, wherein the locking mechanism locks the actuator rod with respect to the outer tube in a plurality of longitudinal positions.

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26. A surgical instrument according to any one of claims 17 to 25, wherein the handle is elongate to enable it to be held in a pen-like grip.

27. A surgical instrument according to any one of claims 17 to 26, wherein the surgical tool comprises miniaturised forceps, clamps, scissors or diathermy hooks.

28. A surgical instrument substantially as hereinbefore described with reference to any one of the accompanying drawings.

AMENDED SHEET